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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,559	02/11/2004	Eric L. Andersen	200311404	5752

22879 7590 11/27/2007

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EXAMINER	
TYLER, NATHAN K	

ART UNIT	PAPER NUMBER
2625	

MAIL DATE	DELIVERY MODE
11/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/777,559	ANDERSEN ET AL.	
	Examiner	Art Unit	
	Nathan K. Tyler	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *38-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *38-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :05122006; 17112006; 20102006; 11022004.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species I and II in the reply filed on 27 September 2007 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 38, 39, 47, 48 rejected under 35 U.S.C. 102(b) as being anticipated by Andersen et al. (US 20020165685 A1).

Regarding **claim 38**, Andersen a method comprising: discloses locating a position of at least one calibration feature printed upon a medium (Fig. 7, step 62 "Determine calibration value

from the lateral position of the scanned target"); and adjusting a calibration characteristic based on the located position of the at least one calibration feature (Fig. 7, step 66 "Adjust lateral position of scan line window").

Regarding **claim 39**, Andersen discloses printing the at least one calibration feature on the medium.

Regarding **claim 47**, Andersen discloses an apparatus comprising: a scan head (Fig. 1, numeral 12 "scanner"); a locator communicating with the scan head and configured to determine a position of at least one calibration feature on a medium ("After the target is scanned (step 58), by analyzing the data file the processor 28 determines the pixels 24 that scanned the target 36, and thus the lateral position of the target" at paragraph [0029]); and an adjuster configured to accept the determined position from the locator and to determine a calibration characteristic based in part on the determined position ("A calibration value representing the lateral position of the target page is stored in the processor 28 (step 64) for adjusting the scan line window width in later scan jobs" at paragraph [0030]).

Regarding **claim 48**, Andersen discloses a print mechanism configured to accept the medium from the media feed and print the at least one calibration feature on the medium ("The printer 18 is preferably used to print the target page 34" at paragraph [0026]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Andersen and Lodwick et al. (US 6226419 B1).

Regarding **claim 40**, while Andersen discloses inserting the medium into a printer with a first orientation; and printing a first calibration feature at a first lateral location on the medium (Fig. 7, step 52 "produce target from stored image"), Andersen does not disclose reinserting the medium into the printer with a second orientation rotated 180 degrees from the first orientation; and printing a second calibration feature at a second lateral location on the medium.

Lodwick teaches creating a first calibration feature on one face of a print medium and a second calibration feature on the opposite face of a print medium ("Another approach requires the user to print a duplexed (two sided) calibration page. The user then holds the page up to a light to determine a set of lines on each side which line up correctly "). Although Lodwick does not explicitly state that the page is reinserted after a 180 degree rotation, it is a well known method in the printer art to create a two sided printed page by printing one side, then reinserting the page into the printer with an orientation rotated 180 degrees from the first orientation (flipped over).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to add the two sided calibration page functionality taught by Lodwick to the calibration system disclosed by Andersen, in order to eliminate misalignment in the printer in addition to correcting the scanning window of the scanner ("variations in printers by the same manufacturer can result in mis-calibrations (e.g., mis-alignment) of a printed image on a page, i.e., wherein the printed image does not appear in the desired position on the page" at Lodwick column 2, line 4).

Regarding **claim 41**, the combination of Andersen and Lodwick as applied to claim 40 discloses that the first calibration feature comprises a longitudinally oriented line (Andersen Fig. 3, numeral 36 is a longitudinally oriented line) and wherein the second calibration feature comprises a longitudinally oriented line (Because Andersen shows the calibration target as a longitudinally oriented line, Andersen as modified by Lodwick would provide the same longitudinally oriented line on both sides of the print medium. Lodwick also suggests longitudinally oriented lines to be used for both calibration features: "to determine a set of lines on each side which line up correctly" at Lodwick column 2, line 18).

Regarding **claim 42**, the combination of Andersen and Lodwick as applied to claim 40 discloses that the first and second calibration features are printed at an substantially identical position relative to a center line of the printer ("The target 36 is preferably a substantially laterally centered vertical line") so that the first and second calibration features are located substantially laterally symmetrically about a center line of the medium (Because both targets are printed on the center line of the page, and because the two targets are printed with a 180 degree

rotation, any misalignment of the printer will cause the two lines to be symmetrical about the center line of the medium).

Regarding **claim 43**, the combination of Andersen and Lodwick as applied to claim 40 does not disclose the step of printing a directional indicator prior to the reinserting step showing the second orientation for reinsertion of the medium. However, Lodwick teaches printing directional arrows to assist the user in orienting the page during the calibration process (Fig. 3, directional arrows 38).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to provide the calibration system disclosed by the combination of Andersen and Lodwick as applied to claim 40 with directional arrows as taught by Lodwick to assist the user in orienting the page during the 180 degree orientation change during duplex printing.

Regarding **claim 44**, the combination of Andersen and Lodwick as applied to claim 40 does not disclose that the first and second calibration feature are printed on a same face of the medium. However, the combination of Andersen and Lodwick does provide for a calibration method in which one target is printed with a 180 degree orientation change relative to the other target. Assuming that the first target is printed with the print head moving left to right, the second target will be printed with the print head moving, relative to the first target, right to left. The same is true for a two sided calibration page, or for a page with two targets printed with a 180 degree orientation change on the same face of the print medium. That is to say, the end result is essentially the same, any lateral offset applied to the left side of the first target will be applied to the right side of the second target. Because the end result is the same, at the time the

invention was made, it would have been obvious to one of ordinary skill in the art to try printing the second calibration target on the same face as the first target, after a 180 degree orientation change, in order to provide the same calibration effect without needing the scanner to read the second calibration target from the back side of the page.

Regarding **claim 45**, the combination of Andersen and Lodwick as applied to claim 40 discloses that the adjusting of the calibration characteristic based on the located position of the at least one calibration feature comprises: locating a first position of a first calibration feature on a medium; locating a second position of a second calibration feature on the medium; and adjusting a lateral calibration characteristic based on the first position and the second position (Because Andersen discloses adjusting a lateral calibration characteristic based on the located position of the first calibration feature (Fig. 7, step 62), it is reasonable to conclude that the combination of Andersen and Lodwick would use the location of both calibration features to adjust a lateral calibration characteristic).

Regarding **claim 46**, the combination of Andersen and Lodwick as applied to claim 40 does not disclose the step of adjusting a lateral calibration characteristic comprises defining a scan center line at a location equally between the first and second positions. However, Lodwick does disclose performing a lateral calibration by comparing the actual distance between two calibration features with an expected distance ("the distance between points F and G can be calculated as 1/2 inch... Furthermore, since the distance between the right-hand margin mark 185 and the right edge 189 of the first calibration sheet 180 is desired to be a specific distance, e.g., one inch, an error between the desired distance and the measured distance can be determined. The processing software can then provide the necessary adjustments

automatically"). Because both calibration features are printed in the center of the page as disclosed by Andersen, the expected distance between the two features will be zero. It would have been obvious at the time the invention was made to one of ordinary skill in the art to further modify the calibration system disclosed by Andersen to calculate the printer offset, and thus the center scan line, by comparing the measured distance between two calibration features with an expected distance as taught by Lodwick, in order to better correct printer misalignment.

Regarding **claim 49**, the combination of Andersen and Lodwick as applied to claim 40 discloses a first calibration target print mechanism configured to cause the print mechanism to print a first calibration feature at a first lateral location on the medium (see grounds for rejection for claim 40); a medium reinsertion mechanism triggered by the first calibration target print mechanism configured to trigger reinsertion of the medium into the print mechanism reoriented by 180 degrees from an original orientation (see grounds for rejection for claim 40); and a second calibration target print mechanism configured to cause the print mechanism to print a second calibration feature at a second lateral location (see grounds for rejection for claim 40) in known relation to the first lateral location on the medium after reinsertion (The printer will attempt to print both calibration features in the center of the page).

Regarding **claim 50**, while the combination of Andersen and Lodwick as applied to claim 40 does not disclose that the medium reinsertion mechanism comprises a prompter configured to prompt reinsertion of the medium into the printer, it is well known in the printer art to provide a prompt to a user during dual sided printing to reinsert the print medium after the first side has been printed [official notice].

Regarding **claim 51**, while the combination of Andersen and Lodwick as applied to claim 40 does not disclose that the medium reinsertion mechanism comprises a feed tray configured to rotate the medium 180 degrees from the original orientation, it is well known in the printer art to provide a printer with a feed path configured to automatically reorient a print medium 180 degrees in order to perform dual sided printing [official notice].

Regarding **claim 52**, the combination of Andersen and Lodwick as applied to claim 40 discloses that the locator is configured to determine a first lateral feature parameter and a second lateral feature parameter of a calibration target (see grounds for rejection for claim 45), the first and second lateral feature parameters offset by a printer offset (both features are inherently offset by a printer offset when they are printed) and wherein the adjuster is configured to accept the first and second lateral feature parameters from the locator and to determine a lateral calibration characteristic based in part on the first and second lateral feature parameters (see grounds for rejection for claim 45).

Regarding **claim 53**, the combination of Andersen and Lodwick as applied to claim 46 discloses that the adjuster is configured to determine a scan center line at a location equally between the first and second positions (see grounds for rejection for claim 46).

Regarding **claim 54**, the combinations of Andersen and Lodwick as applied to claim 40 discloses that the adjuster is configured to determine the lateral calibration characteristic based in part on the known lateral relation of the first and second lateral locations (see grounds for rejection for claim 45).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan K. Tyler whose telephone number is 571-270-1584. The examiner can normally be reached on M-F 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan K Tyler
Examiner
Art Unit 2625

KING Y. POON
SUPERVISORY PATENT EXAMINER